IS 5006 (1968): Battery Terminal Pliers [PGD 5: Assembly Hand Tools]

BLANK PAGE

IS : 5006 - 1968
(Reaffirmed 1978)
(Reaffirmed 2004)

Indian Standard

SPECIFICATION FOR BATTERY TERMINAL PLIERS

(First Reprint JUNE 1981)

UDC 621.881.4:621.35.035.5

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs 5·00 Gr 1

April 1969

Indian Standard

SPECIFICATION FOR BATTERY TERMINAL PLIERS

Hand Tools Sectional Committee, EDC 12

Chairman	*Representing*
SHRI K. N. P. RAO	The Tata Iron and Steel Co Ltd, Jamshedpur
Members	
SHRI K. R. VENKATACHALAM (*Alternate* to Shri K. N. P. Rao)	
SHRI SISIR BANERJEE	Metalcraft (India) Ltd, Calcutta
SHRI H. N. GANGULY (*Alternate*)	
DIRECTOR OF FLEET MAINTENANCE	Indian Navy
SHRI L. R. GOSAIN	Railway Board (Ministry of Railways)
LT-COL J. C. JOSHI	Department of Defence Production, Ministry of Defence (DGI)
SHRI M. R. S. SOORMA (*Alternate*)	
SHRI S. K. KEMPAIAH	The Mysore Implements Factory, Hassan
SHRI N. S. VENKATESHA (*Alternate*)	
SHRI G. KUPPUSWAMY	Directorate General of Supplies & Disposals
SHRI S. N. VOHRA (*Alternate*)	
SHRI D. MAJUMDAR	Development Commissioner, Small Scale Industries (Ministry of Industrial Development & Company Affairs)
SHRI G. B. JAKHETIA (*Alternate*)	
SHRI S. D. MAJUMDAR	National Test House, Calcutta
SHRI T. H. NIRMAL	Ministry of Food, Agriculture, Community Development & Co-operation
SHRI GOBINDO PROSAD PAUL	Gobindo Sheet Metal Works & Foundry, Calcutta
SHRI E. K. RAMAKRISHNAN	Kumar Industries, Parli (S. Malabar)
SHRI K. SANKARANARAYANAN	Directorate General of Technical Development (Ministry of Supply, Technical Development and Materials Planning)
SHRI SATISH CHANDRA (*Alternate*)	
SHRI R. P. SOOD	Director of Industries, Government of Haryana
SHRI M. SRINIVASAN	Railway Board (Ministry of Railways)
SHRI R. T. S. RANGIAH (*Alternate*)	
SHRI R. M. TALATI	Usha Forgings & Stampings Limited, New Delhi
SHRI R. M. MOUDGILL (*Alternate*)	
SHRI T. C. THADANI	Engineer-in-Chief's Branch, Army Headquarters
SHRI M. V. PATANKAR, Director (Mech Engg)	Director General, ISI (*Ex-officio Member*)

Secretary

SHRI B. L. RAINA

Assistant Director (Mech Engg), ISI

(*Continued on page* 4)

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR BATTERY TERMINAL PLIERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 20 December 1968, after the draft finalized by the Hand Tools Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 This standard lays down the requirements for pliers suitable for handling storage battery terminals and connecting plugs.

0.3 In the preparation of this standard, assistance has been derived from GGG-P-471G ' Pliers ', issued by USA Federal Supply Service.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

---

1. SCOPE

1.1 This standard covers the requirements for battery terminal pliers.

2. NOMENCLATURE

2.1 For the purpose of this standard, the nomenclature as given in IS : 2615-1964† shall apply.

3. GENERAL REQUIREMENTS

3.1 The material, manufacture, workmanship and finish, tests, preservation and packing, and sampling shall conform to IS : 2615-1964†.

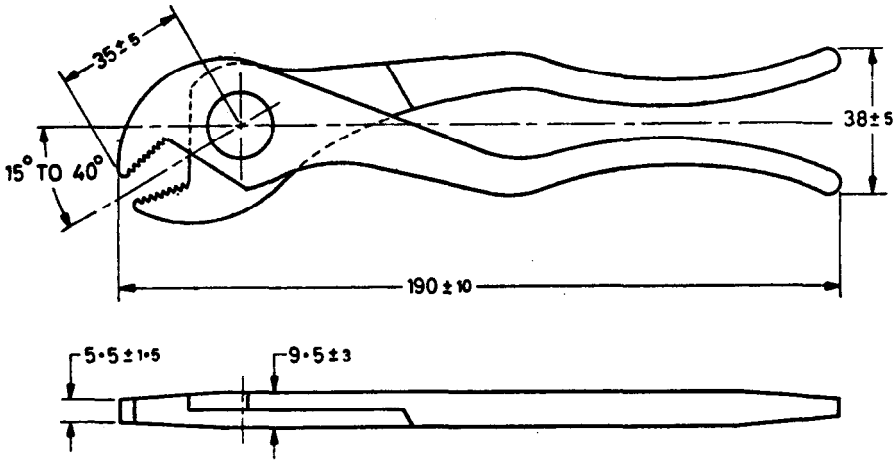
4. DIMENSIONS

4.1 The main dimensions for battery terminal pliers shall be as given in Fig. 1.

---

*Rules for rounding off numerical values (*revised*).

†General requirements for pliers, pincers and nippers.



All dimensions in millimetres.

FIG. 1 DIMENSIONS FOR BATTERY TERMINAL PLIERS

4.1.1 With the jaws in parallel position, the jaw opening shall be not less than 14 mm and not more than 21 mm. The distance between the outsides of the handles at their point of widest separation shall not exceed 100 mm. The jaw opening of the pliers at the point of widest separation shall in no case be less than 21 mm.

5. HARDNESS

5.1 The jaws of pliers shall have a hardness value within the range of 450 to 700 *HV* (*see* IS : 1501-1959*).

5.1.1 The hardness shall be tested as specified in IS : 2615-1964†.

6. MARKING

6.1 The pliers shall be clearly and legibly stamped with the manufacturer's name, initials and/or recognized trade-mark and year of manufacture, if required by the purchaser.

6.1.1 The pliers may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

*Method for Vickers hardness test for steel.

†General requirements for pliers, pincers and nippers.

7. TESTS

7.1 In addition to the tests specified in IS : 2615-1964*, the following test shall also be carried out.

7.2 Handle Load Test — The pliers shall be tested for deflection and permanent set in accordance with **9.5** of IS : 2615-1964*. The moment to be employed shall be 13 kgf·m and combined deflection and combined permanent set shall not exceed 13·5 and 3·3 mm respectively.

*General requirements for pliers, pincers and nippers.

(*Continued from page* 1)

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Conversion*
Force	newton	N	1 N = 1 kg.1 m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

INDIAN STANDARDS INSTITUTION

Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002

Telephones : 26 60 21, 27 01 31 **Telegrams : Manaksanstha**

Regional Offices:		Telephone
Western : Novelty Chambers, Grant Road	BOMBAY 400007	37 97 29
Eastern : 5 Chowringhee Approach	CALCUTTA 700072	23-08 02
Southern : C. I. T. Campus, Adyar	MADRAS 600020	41 24 42
Branch Offices:		
'Pushpak', Nurmohamed Shaikh Marg, Khanpur	AHMADABAD 380001	2 03 91
'F' Block, Unity Bldg, Narasimharaja Square	BANGALORE 560002	2 76 49
Gangotri Complex, Bhadbhada Road, T.T. Nagar	BHOPAL 462003	6 27 16
22E Kalpana Area	BHUBANESHWAR 751014	5 36 27
Ahimsa Bldg, SCO 82-83, Sector 17C	CHANDIGARH 160017	2 83 20
5-8-56C L. N. Gupta Marg	HYDERABAD 500001	22 10 83
D-277 Todarmal Marg, Banipark	JAIPUR 302006	6 98 32
117/418 B Sarvodaya Nagar	KANPUR 208005	8 12 72
Patliputra Industrial Estate	PATNA 800013	6 28 08
Hantex Bldg (2nd Floor), Rly Station Road	TRIVANDRUM 695001	32 27